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COVID-19 and the age of the contactless customer experience: Winning the trust of consumers in a no-touch world

As the COVID-19 pandemic continues to hit hard across the world, consumers are putting a high price on health factors when interacting with organizations. To reduce the risk of infection, people are anxious to minimize physical contact and maximize contactless interactions, and companies are taking note. Tesla, for example, offers a contactless car delivery scheme that minimizes customer contact with the car maker's employees.[1]

This trend raises a number of questions for organizations and their leaders. How can organizations redesign customer experiences to align with this contactless world? Will the focus on touchless interactions persist beyond the pandemic? And how should organizations tackle consumer concerns about data security and privacy, given that a contactless experience demands increased rollout of technologies such as facial recognition?

To help answer these questions, we surveyed over 4,800 consumers and over 950 executives from 12 major economies: China, the United Kingdom, the United States, Australia, India, Sweden, the Netherlands, Germany, France, Spain, Italy, and Brazil. Drawing on that research, this research note focuses on four key consumer trends:

1. Touchless interfaces have become integral to the customer experience in a health-and-safety conscious world.

2. The pandemic is offering a unique opportunity to accelerate the use of voice-based interfaces in physical settings.

3. The pandemic has caused an upsurge in the adoption of facial recognition technologies.

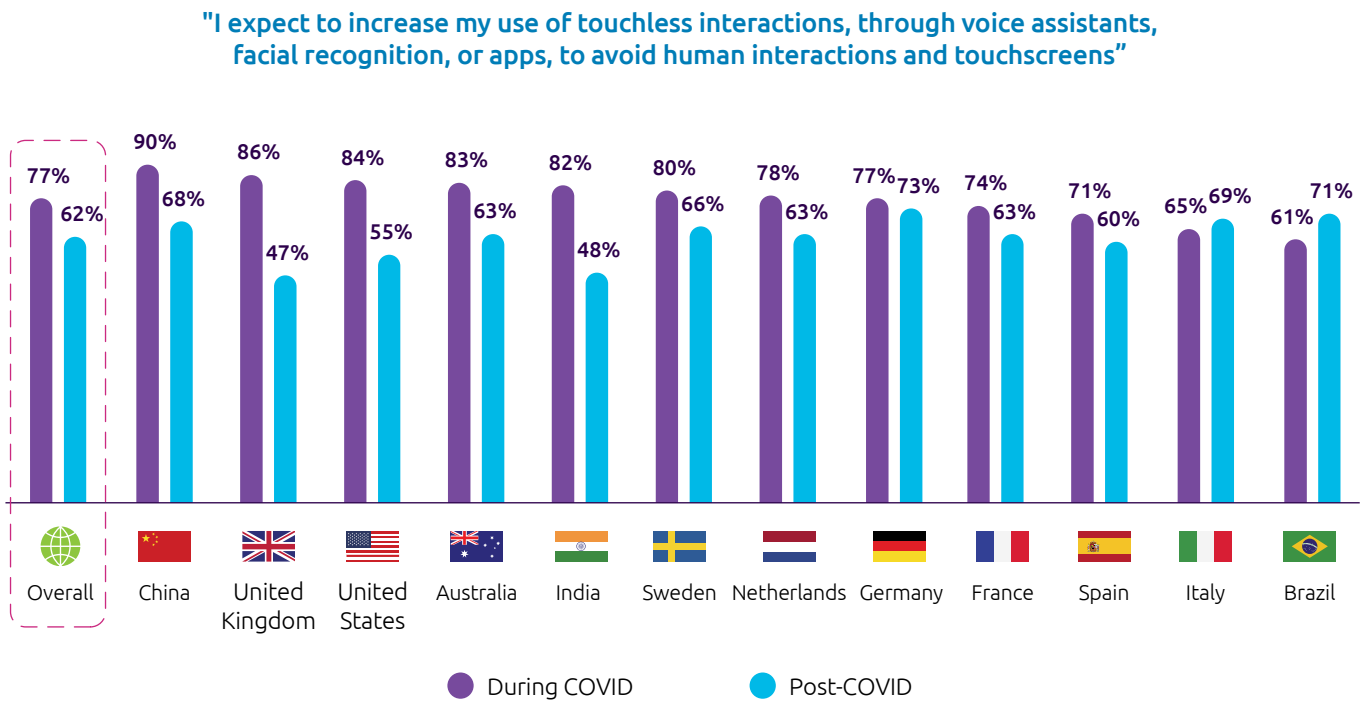
4. Mobile-based contactless transactions, such as retail-store self-checkouts that use mobile apps, are gaining ground as consumers try to avoid any shared interfaces.

Touchless interfaces have become integral to the customer experience in a health-and-safety conscious world

The pandemic is a major catalyst for touchless interface adoption: 77% of consumers expect to increase their use of touchless technologies to avoid interactions that require physical contact. And, as Figure 1 shows, even when the pandemic is over, 62% expect to increase their use, demonstrating that this is a trend with longevity.

In some countries, there is a predicted waning of enthusiasm for contactless once the pandemic is behind us. However, this perhaps just reflects the difference between today's heightened sense of anxiety and how consumers will behave in a world where health-and-safety concerns are more balanced against other needs.

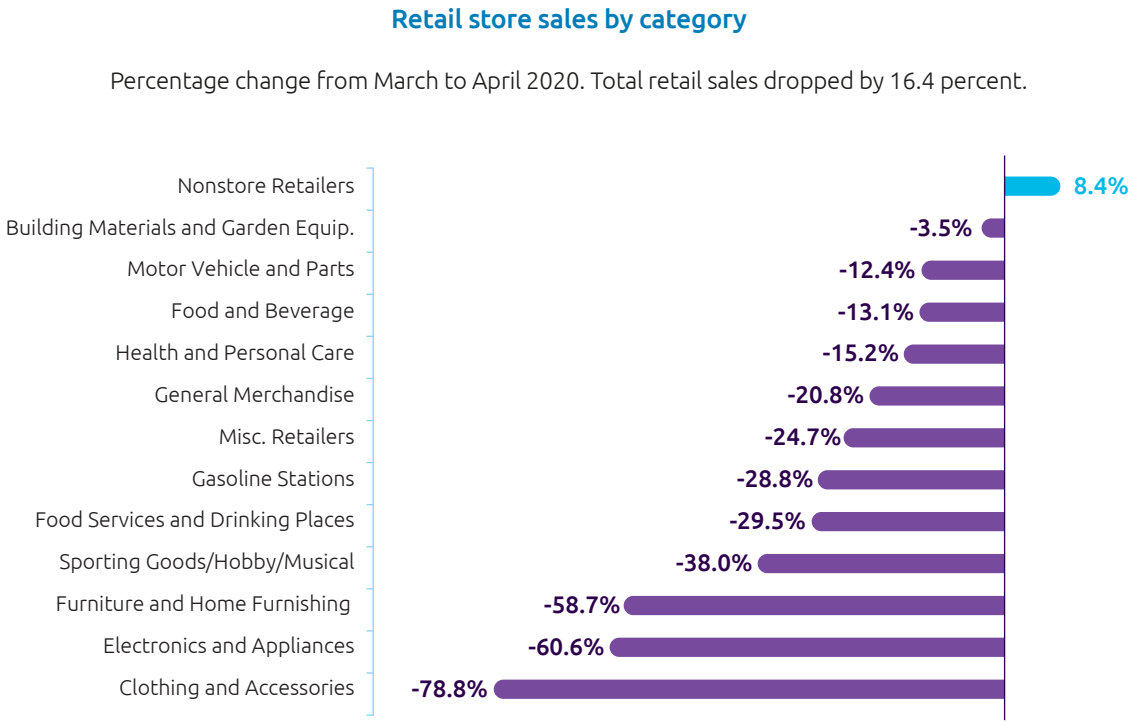
Figure 1: Increase in touchless interactions during the pandemic and beyond



Source: Capgemini Research Institute, Consumer Survey, April 2020, N=4,818 consumers.

The trend towards touchless interactions is reflected strongly in retail spending patterns over the course of the pandemic. Data from the US, for instance, shows that while consumer spending fell by a record 16.4% in April, online retailers saw an 8.4% increase in sales during the same period (see Figure 2)[2]. These shifts in spending highlight the need for organizations to recreate the experience and safety of online shopping within physical settings, in order to draw customers in-store.

Figure 2: Consumers shift to online shopping amid the pandemic



Source: U.S. Census Bureau, CNBC.

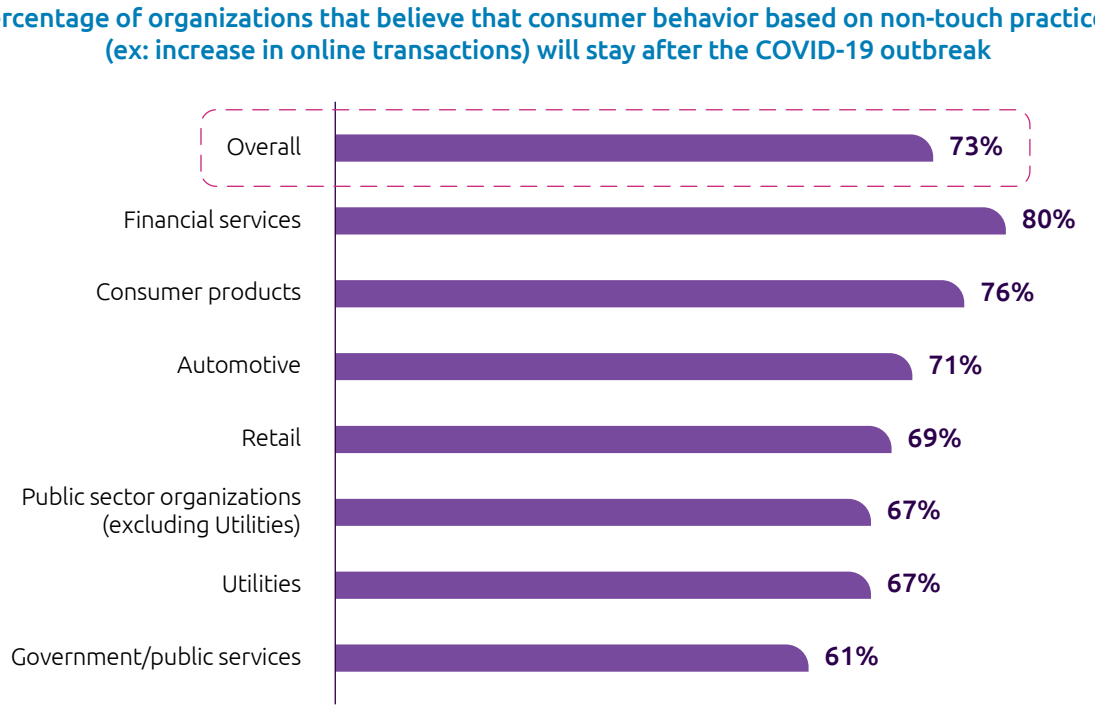
77% OF CONSUMERS EXPECT TO INCREASE THEIR USE OF TOUCHLESS TECHNOLOGIES TO AVOID INTERACTIONS THAT REQUIRE PHYSICAL CONTACT

For their part, organizations recognize the need for touchless interactions and expect them to be a trend that continues post-COVID. As Figure 3 shows, 73% believe that consumer appetite for non-touch practices including online transactions will remain even in a world where the pandemic is behind us. Financial services organizations are particularly strong proponents of this trend. Consumers' fears of virus transmissions via cash, and concerns over interactions involving physical bank branches, have a role to play in this.

Actions points for organizations

- **Adopt a test-and-learn approach:** As they look to identify areas where human interactions and touch-based screens can be replaced with non-touch interfaces, organizations need to adopt a test-and-learn approach. Critical success factors include:
  - **Incorporate feedback from consumers:** Monitoring and incorporating consumer feedback about their new non-touch-based experience is an important step. Capturing and analyzing consumer behavior in accordance with the local privacy laws is important.
  - **Secure employee buy-in:** The support and buy-in of affected employees will be critical and they will also need adequate training. Customers will be more satisfied if they can approach employees and get helpful, informed support in using the solution.
  - **Leverage data to iterate and improve the customer experience:** Organizations need to adopt an iterative approach towards understanding how consumers interact with touchless interfaces and keep improving on the experience. The use of data and analytics is critical to this as it can help organizations identify what works well and what does not. However, our previous research found that 40% of retailers, for instance, do not apply a data-driven approach to implementing insights from in-store automation initiatives.[3]

Figure 3: Organizations recognize the significance of non-touch-based interactions



Source: Capgemini Research Institute, Executive Survey, April 2020, N=956 executives.

The pandemic offers a unique opportunity to accelerate the use of voice-based interfaces in physical places

In recent years, conversational assistants have gone mainstream, with busy consumers increasingly willing to see them as a trusted companion. For example, in recent research,[4] we found that consumers around the world were increasingly willing to use these technologies to research and buy products or seek financial advice. Today, voice interfaces are helping organizations engage with consumers under lockdown. For instance, India-based ICICI Bank introduced voice assistant services during the pandemic. Consumers could use voice-enabled smart speakers to access a range of banking services, such as account details, credit card history, or transaction details.[5] The "non-touch" capabilities of voice interfaces provide unique opportunities for organizations to engage with consumers in physical locations too, from shops to government offices.

Consumers want to use voice interfaces in physical and public places during the pandemic and beyond

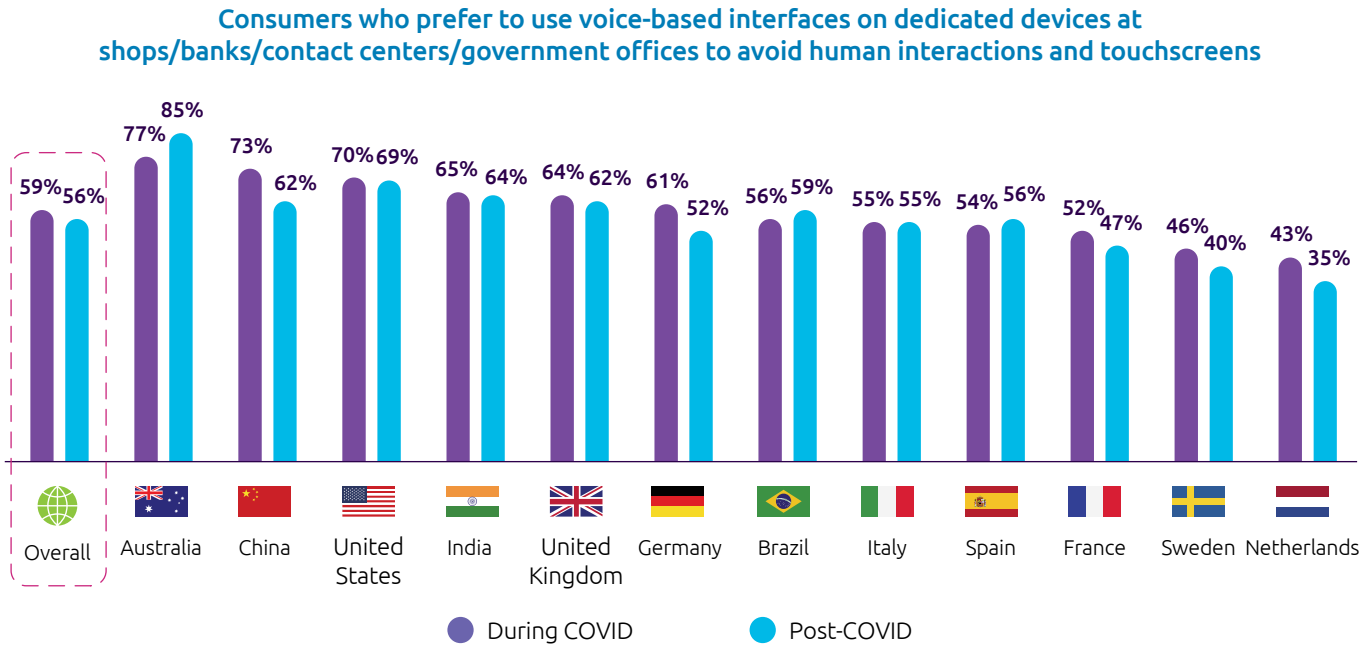
Our research revealed that 59% of consumers prefer to use voice interfaces in public places – such as shops, banks, or government offices – to avoid touch-based practices during the pandemic. After the pandemic, this trend remains largely the same, as Figure 4 shows.

Numerous use cases for voice interfaces in physical places

Today's preference for voice is driving a range of applications. For example, in China, voice-enabled elevators equipped with smart speakers were used during the pandemic, replacing the need to touch the controls.[6] Voice interfaces have been deployed in a variety of use cases, including:

- **In-store ordering:** Stores have been experimenting with voice-based ordering even before pandemic. For example, McDonalds announced the introduction of voice-recognition for drive-through orders in September 2019.[7] During the pandemic, this has continued. Starbucks, for example, when it recently re-opened some stores in the US, emphasized the availability of voice-based ordering.[8]

Figure 4: Consumer preference for voice interfaces during the pandemic and beyond



Source: Capgemini Research Institute, Consumer Survey, April 2020, N=4,818 consumers.

- **In-store engagement:** H&M previously introduced smart mirrors to its stores, which are enabled by voice and facial recognition. Solutions are also evolving to provide product recommendations in-store, with voice being positioned as a "store assistant."[10]

- **In-car functionalities:** Recent research we conducted found that 38% of consumers want more voice controls in their vehicles, up from 33% before the outbreak started.[11] Automobile players like Volkswagen are already positioning voice assistants as a central interface for the car's infotainment systems and for drivers to control the vehicle.[12]

Actions points for organizations

- **Identify the touchpoints for deployment that meet critical consumer needs and wants:** Organizations should identify the touchpoints in the consumer journey where voice-based interfaces are suitable and can be deployed. Understanding different segments' likes and dislikes needs to shape the conversational strategy as well as the experience design.

- **Provide interactions that are personalized, contextual, and more human-like:** Consumers prefer human-like interfaces, where interactions are contextualized, relevant, and personal. This requires intimate customer understanding, such as knowing how consumers feel about different tones of voice.

- **Support interfaces with images and other visual content:** The conversational assistant of Mercedes-Benz, "Ask Mercedes," helps drivers explore in-car functions and features with text, images, videos, and website links.[13] Organizations should support the voice interface experience with videos, images, and textual information as needed.

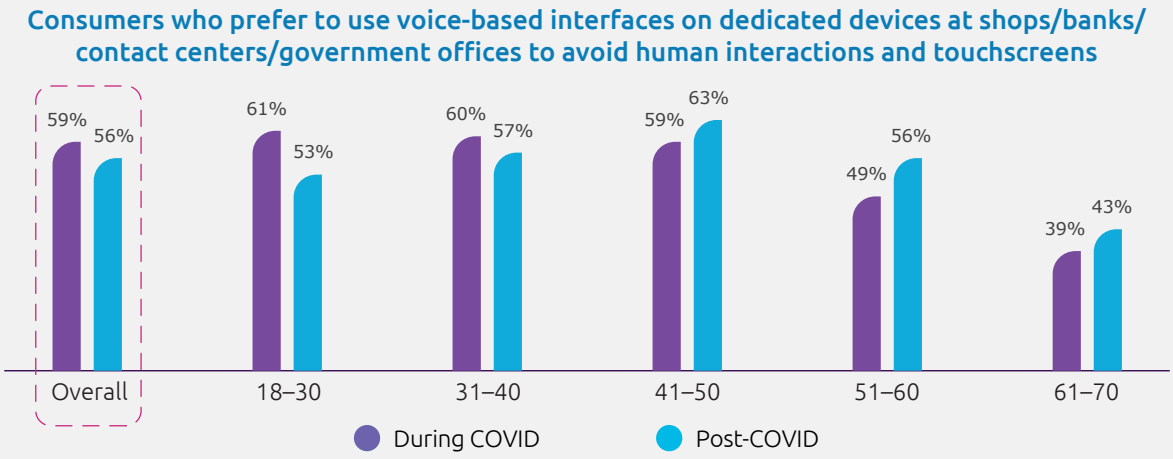
- **Build in secure authentication:** Voice–based authentication, based on a digital record of voice prints, is imperative, particularly for use cases that involve payment. Banks have been using voice print authentication techniques in their call centers that incorporate close to a hundred variables, from validating accents to vocal patterns.[14] These techniques can be extended for validation in public places too.

Digital inclusion and voice interfaces

Touchless interfaces, especially voice-based interfaces, can help people who are less skilled or comfortable with using apps and therefore increase "digital inclusion." For instance, Jio, a major India-based telecom player, found that voice is often the preferred interface for first-time users of mobile data and apps.[16] Strong natural language processing capabilities will be key to winning over those people who are offline or digitally excluded.

Our research shows that consumers across different age groups have an increasing appetite for voice and that this enthusiasm will largely continue after the pandemic.

Figure 5: Consumer preference for voice-based interactions across age groups



Source: Capgemini Research Institute, Consumer Survey, April 2020, N=4,818 consumers.

- **Prioritize ease of use, reliability and privacy in the design:** A voice interface designed for public spaces should be easy to use and should be designed keeping in mind the acoustic infrastructure of the physical location. Accordingly, the voice interface should be equipped with noise reduction, echo cancellation and speaker tracking features (in case a user is moving) in order to receive a clear voice sample. For instance, an Israel-based auto startup provides an audio-visual voice solution for cars, that tracks lip movement and zooms in on the driver while clearing all background noise.[15] In addition to reducing ambient noise, voice-based kiosks should also be designed to address users' privacy concerns when interacting with voice-based interfaces in public spaces.

The COVID-19 pandemic has caused an upsurge in the adoption of facial recognition technologies

With the focus shifting heavily towards health and wellness parameters, more consumers are accepting facial recognition. As Figure 6 shows, 52% prefer facial recognition for authentication at retail stores, banks, airports, and offices during the current scenario. However, this falls to 39% in post-pandemic times. This drop-off suggests that privacy concerns persist and will need to be addressed for consumers' appetites to remain strong.

Facial recognition systems have been effective contactless alternatives for consumers during the pandemic

Facial recognition has been used for multiple use cases during the current pandemic to replace touch-based systems, and is becoming more advanced by the day.

- **Authentication systems:** Biometric authentication systems serve as one of the primary use cases for facial recognition systems. Given its potential to replace fingerprint-based systems, it has served as an effective tactic against COVID-19. Even in pre-COVID times, the applications were gaining traction:
  - In retail, China-based JD.com's self-service shops give access to customers using facial recognition.[17]
  - In 2019, Spain's CaixaBank rolled out a new service to give customers the option of using facial recognition technology to withdraw cash from ATMs instead of using their personal identification numbers.[18]
- **Self-checkout and contactless payment:** Another traditionally high-touch exercise is offline payment. Several contactless payment methods have emerged in the past decade and facial recognition has gained precedence as well. It offers customers a way to experience contactless self-checkout and safeguard against transmission of pathogens.
  - Back in 2016, MasterCard had launched its "selfie pay" application in Europe for payment authentication. This allows a customer to simply make an online payment by displaying their face to their smartphone cameras.[19]

Figure 6: In a post-COVID world, privacy would again be of primary concern to consumers

Question: "Indicate how far your preferences vary for facial recognition for authentication at shops/banks/contact centers/government offices during the COVID situation and post-COVID situation."

Source: Capgemini Research Institute, Consumer Survey, April 2020, N=4,818 consumers.

– Recently, China's WeChat Pay rolled out its "Frog Pro" POS device. Using 3D cameras, this can scan customers' faces to make payments at retail checkout counters.[20]

Several technology companies have also been working on enhanced versions of facial recognition that can help accurately identify individuals even when they are wearing masks – a challenge with existing facial recognition systems. China-based Hanwang Technologies, for instance, has devised a system that can identify mask-wearers with 95% accuracy.[21]

Privacy concerns still loom large and will regain precedence once the health emergency subsides

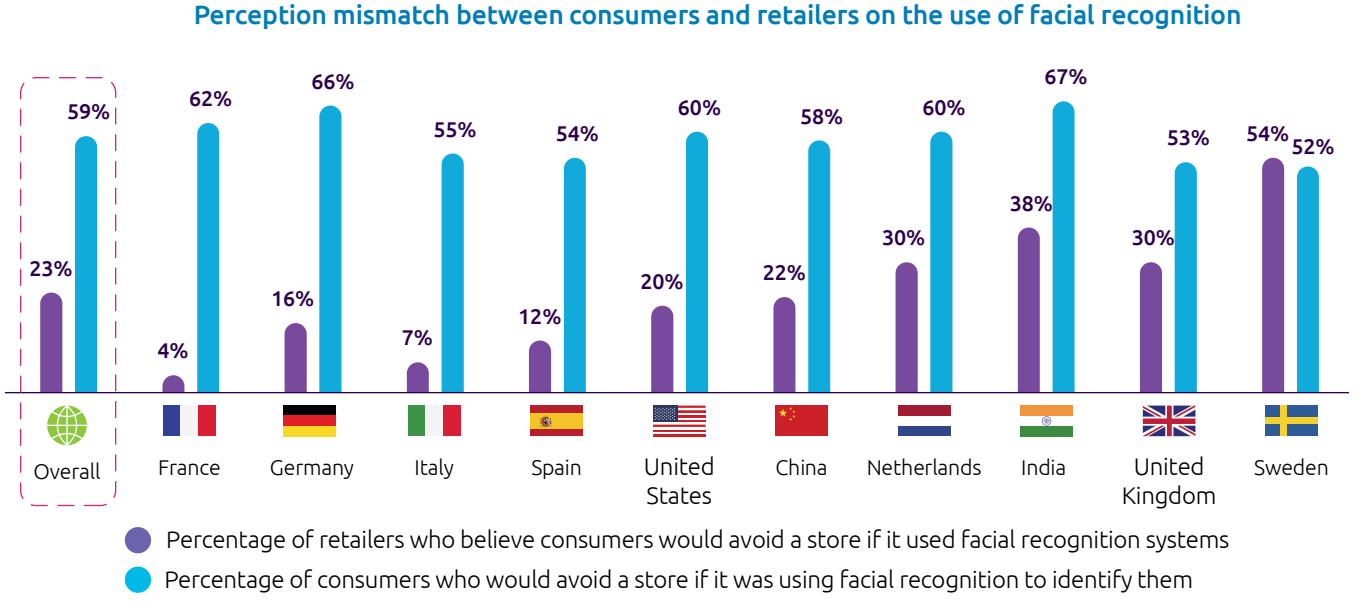
In research conducted in 2018, we found that two-thirds (66%) of consumers would like to be made aware when companies are enabling interactions via AI, including contactless features such as facial recognition.[22] A similar deep-dive into the retail sector in 2019 also found that 59% would avoid a retail store if it used facial recognition to identify them. Retailers themselves, however, are seemingly underestimating the strength of feeling on this issue, with only 23% of retail organizations saying that consumers would avoid a store if it was using facial recognition to identify them (see Figure 7).[23]

Action points for organizations

- **Be transparent and acquire consent from consumers:** Consumer perception towards face recognition technology will only improve with transparent data-handling. The core of transparency is the practice of acquiring consent from the consumers before collecting and using their personal data. Consent should be a fully transparent process with the consumer being given every detail of what will be collected and for what purpose, which third-party firms the data would be shared with, and where and how long the data will be stored.

- **Offer consumers a sense of control over their choices:** Companies should offer consumers a choice between adopting facial technology and other traditional forms of authentication, checkout, and payment. This approach can help further dispel concerns about potential data malpractices and give them a sense of control over the experience. Our 2019 retail research found that a majority (71%) of consumers want retailers to provide an "opt-out" option to allow them to not use automation technologies.[24] For instance, Brazil-based retailer Zaitt offers its consumers the choice to pay either through a mobile-based application using scan-and-go technology, or through facial recognition RFID that automatically detects customers through radio signals.[25]

Figure 7: Retailers underestimate consumers' desire to avoid facial recognition



Source: Capgemini Research Institute, Automation in Retail Stores Research, Executive Survey, October 2019, N=500 retail executives; Capgemini Research Institute, Automation in Retail Stores Research, Consumer Survey, October 2019, N=5,110 consumers.

Computer vision and the pandemic

Computer vision, a sub-field of artificial intelligence, is gaining prominence in the response to the pandemic. It allows computers to build a detailed understanding of the visual world through images and videos. Although it is still nascent, it is slated to revolutionize public and private health monitoring systems in the medium to long term.

- **Applications in social distancing and traffic management**

  A range of tech companies have come up with use cases and prototypes for tracking and monitoring social distancing norms, using multi-object tracking in three-dimensional spaces. US-based Nunima.co has developed a tool that has been used to understand how social distancing is being followed in New York City, the worst-affected megacity in the world.[26] These technologies could also be employed in urban traffic management as part of the battle against congestion.

- **Applications in physical retail stores**

  Computer vision has proven to have numerous applications in bricks-and-mortar retail stores. These include automated payments, shelf management, theft prevention, and employee performance monitoring. Amazon Go has already begun implementing self-checkout systems and automated payments using computer vision.[27] As with facial technology, this helps deliver a contactless store experience, thereby reducing the chances of infection.

- **Applications in patient identification**

  Radiologists have been developing computer vision use cases that identify COVID-19 positive cases, using techniques such as segmentation of CT scan imagery. This helps radiologists accurately detect lung infections, a potential indicator of COVID-19. Alibaba Group has developed an AI-based diagnostic and analytical tool that uses CT imagery to detect the virus with 96% accuracy and in less than 30 seconds.[28] Thermal imaging is another computer vision-enabled technique that can be used to detect whether people are infected by reading body temperature. This approach was adopted widely in Taiwan in the early days of the pandemic, leading to early containment of the virus.[29]

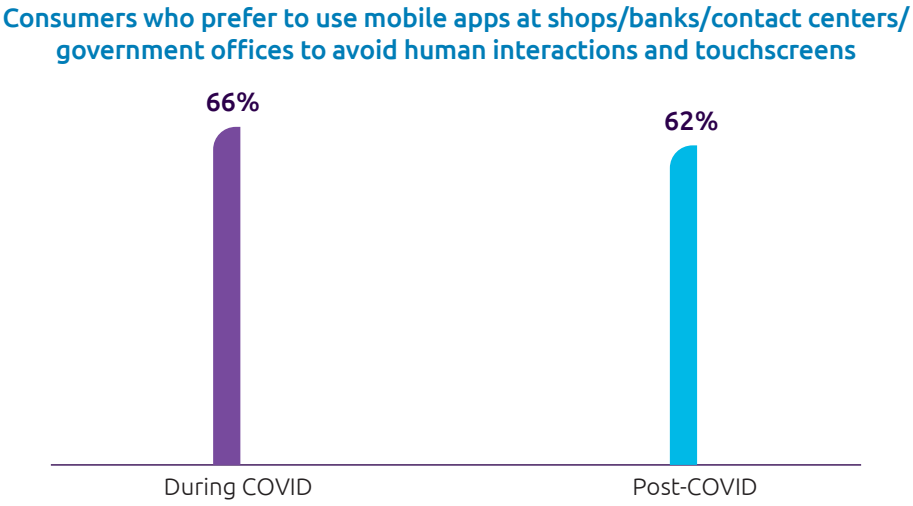
52% OF CONSUMERS PREFER FACIAL RECOGNITION FOR AUTHENTICATION DURING THE COVID-19 PANDEMIC

- **Offer consumers an avenue for value exchange:** Apart from dispelling worries regarding privacy and security, companies should actively seek to inform and educate the consumers regarding the benefits of using facial recognition in light of the pandemic. Not only does facial recognition improve ease of operations in retail stores, airports, banks, among other sites, it supports decongestion of these public spaces and helps maintain social distancing. Further, face-based self-checkout and payment systems further reduce chances of infection by making the consumer experience more contactless.

Mobile-based touchless transactions are gaining ground as consumers veer away from shared interfaces

The mobile phone is emerging as a key enabler of a range of transactions, as consumers grow increasingly cautious of touching publicly shared interfaces in today's pandemic environment. We found that 66% of consumers prefer to use mobile apps at physical locations such as stores and bank branches instead of touch-based alternatives (see Figure 8). And, 62% would prefer to do so even after the pandemic subsides.

Figure 8: Consumers prefer to use their mobile phones for transactions to avoid direct contact with shared interfaces

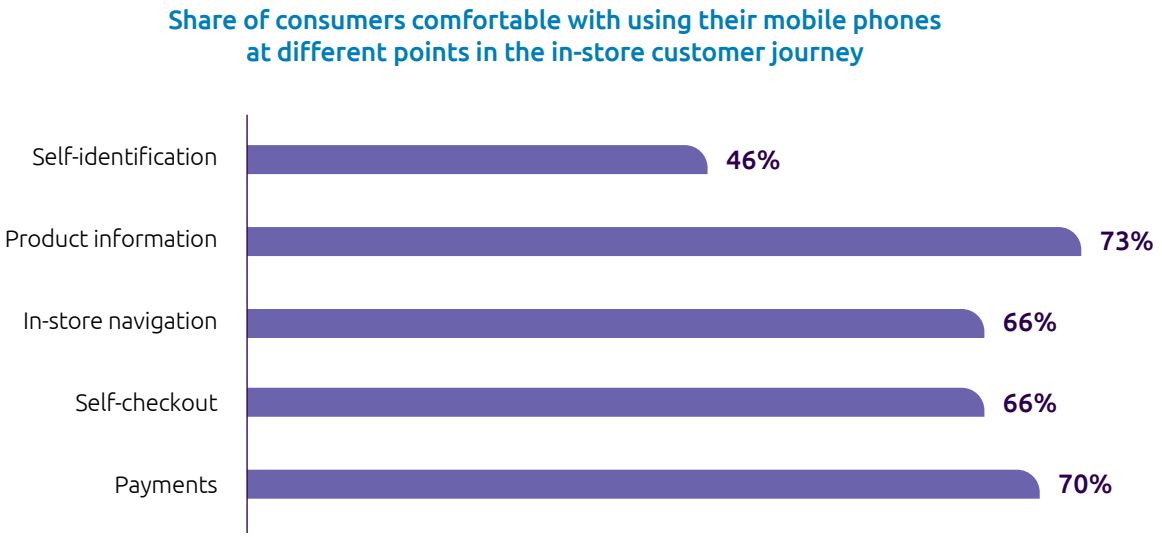


Source: Capgemini Research Institute, Consumer Survey, April 2020, N=4,818 consumers.

66% OF CONSUMERS PREFER TO USE MOBILE APPS AT PHYSICAL LOCATIONS SUCH AS STORES AND BANK BRANCHES INSTEAD OF TOUCH-BASED ALTERNATIVES

In recent years, consumers have grown increasingly comfortable with using their mobile phones for a range of activities in an in-store retail environment. Our 2019 research, for instance, revealed that 66% of customers are comfortable using their mobile phones for self-checkouts and 70% for payments (see Figure 9).[30]

Figure 9: Consumers are comfortable with using their own mobile phones for a variety of purposes in-store



Source: Capgemini Research Institute, Automation in Retail Stores Research, Consumer Survey, October 2019, N=5,110 consumers.

Mobile apps are helping organizations deliver contactless experiences during the pandemic

- **Contactless payments.** The impact of the pandemic on the consumer psyche is reflected most strikingly in the increased adoption of contactless payments. In a recent survey by Mastercard, 82% of respondents saw contactless payments as a "cleaner" option. And, in the first quarter of 2020, Mastercard saw a 40% rise in the volume of contactless transactions.[31] Blake Rosenthal, executive vice president and head of Mastercard Acceptance Solutions, says, *"Social distancing does not just concern people's interactions with each other; it includes contact with publicly shared devices like point of sale terminals and checkout counters. Contactless offers consumers a safer, cleaner way to pay, speed at checkout, and more control over physical proximity at this critical time."*[32]
- **Contactless retail experiences.** Mobile-based self-checkout solutions are allowing retailers to offer safer shopping experiences during the pandemic. Walmart, for instance, has enabled its customers to link their Walmart shopping app with the Walmart mobile wallet. Customers can then scan a QR code that is synced with the app to pay for products with their mobile phones at check-out. This has eliminated the need for customers to touch a shared screen during self-checkout.[33] Our recent survey has shown strong customer interest in such solutions, with 41% of consumers opting for non-touch-based self-checkout systems (using their own phone, for instance) when shopping in the store.[34]

  Mobile apps are also being used to support innovative retail formats that can help with safe distancing during the pandemic. Swedish retailer Lifvs, for instance, operates a chain of unmanned convenience stores that consumers can access using their mobile apps. Customers can open the door to the shops, scan products, and pay for them using just their mobile apps. This has been particularly helpful for at-risk segments, such as older consumers, who need to avoid more crowded stores during the pandemic.[35]

- **Contactless vehicle purchases and deliveries.** Contactless technologies are gaining ground in the automotive sector as well, with several companies

removing the touch-based aspects of the buying and servicing process. For instance, Volvo Cars India and BMW India have initiated contactless programs that allow customers to book car services online from the nearest dealership through mobile websites and third-party applications.[36] Tesla has rolled out contactless deliveries enabled by the Tesla mobile app. Customers can collect newly purchased cars from a designated delivery location by unlocking the car via the mobile app.[37]

Action points for organizations

- **Redesign the customer journey with mobile-centric experiences in mind.** The pandemic has brought health and safety concerns to the fore like never before. Organizations should therefore revisit the entire customer journey to identify areas where physical touchpoints, especially shared interfaces, can be replaced with safer alternatives that involve the customer's own mobile phone. Organizations should also ensure that consumers are made aware of these alternatives and are provided with the necessary support to start using them. This is especially critical for older consumers, who are likely to need more support in using their mobile phones to access services. Organizations should pay special attention to older customers to ensure that they are adequately supported during the crisis.
- **Offer customers the choice of multiple mobile payment solutions.** Organizations can help consumers switch more easily to mobile payment solutions by offering a wider variety of options, through integration with a range of widely used mobile wallets. In addition, organizations should also consider newer mobile payment solutions, such as mobile apps embedded with QR codes. These have already proven to be popular in some parts of the world and can also help from a safety standpoint in the current crisis. Unlike NFC technologies, for instance, QR codes can be scanned from a few meters away, helping customers better maintain safe distancing.[38]
- **Focus on security and fraud prevention in the app design process.** While online transactions have increased during the crisis, so have instances of online fraud. In the US alone, customers have lost over $13 million due to COVID-19-related fraud.[39] As consumers increasingly turn to using mobile apps, especially payment apps, organizations should ensure that security is an integral part of the app design process. In addition, they should also develop and share guidelines to help customers use mobile apps securely.

Conclusion

The COVID-19 pandemic has shifted consumer preferences towards health and safety parameters. Consumers have begun adopting social distancing and sanitary practices as new and potentially permanent norms in their lives. As part of this, they have grown increasingly cautious of touching shared interfaces and objects foreign to them. This major behavioral shift means that, across different sectors, people are looking for touchless practices. Organizations must therefore reassess their customer experience, with a focus on emerging technologies such as vocal interfaces, facial recognition, and mobile-based applications. At the same time, however, they must bear in mind critical concerns over data privacy and security. Fair and transparent policies will be critical to ensure these technologies continue to thrive once the worst of the pandemic is behind us.

This document is part of the Capgemini Research Institute's special series of research notes on pragmatic tips to help organizations tide over the COVID-19 pandemic. You can find more such research notes and other tips and analyses at : https://www.capgemini.com/our-company/covid-19-insights-for-today-and-tomorrow/

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How Capgemini can help you

An essential component of our AI portfolio of services

Our AI in CX proposition is part of the suite of Capgemini services – Perform AI – and is a catalyst for AI-infused customer experience transformation. Our AI-infused CX roadmap follows three streams to progressively increase the value, transformation and even disruption to the organization:

Activate: Experimenting and prioritizing impactful use cases with a focus on new technology and architecture

Transform: Transforming towards humanized customer experiences

Reimagine: Empowering organizations to deliver new customer-centric business models.

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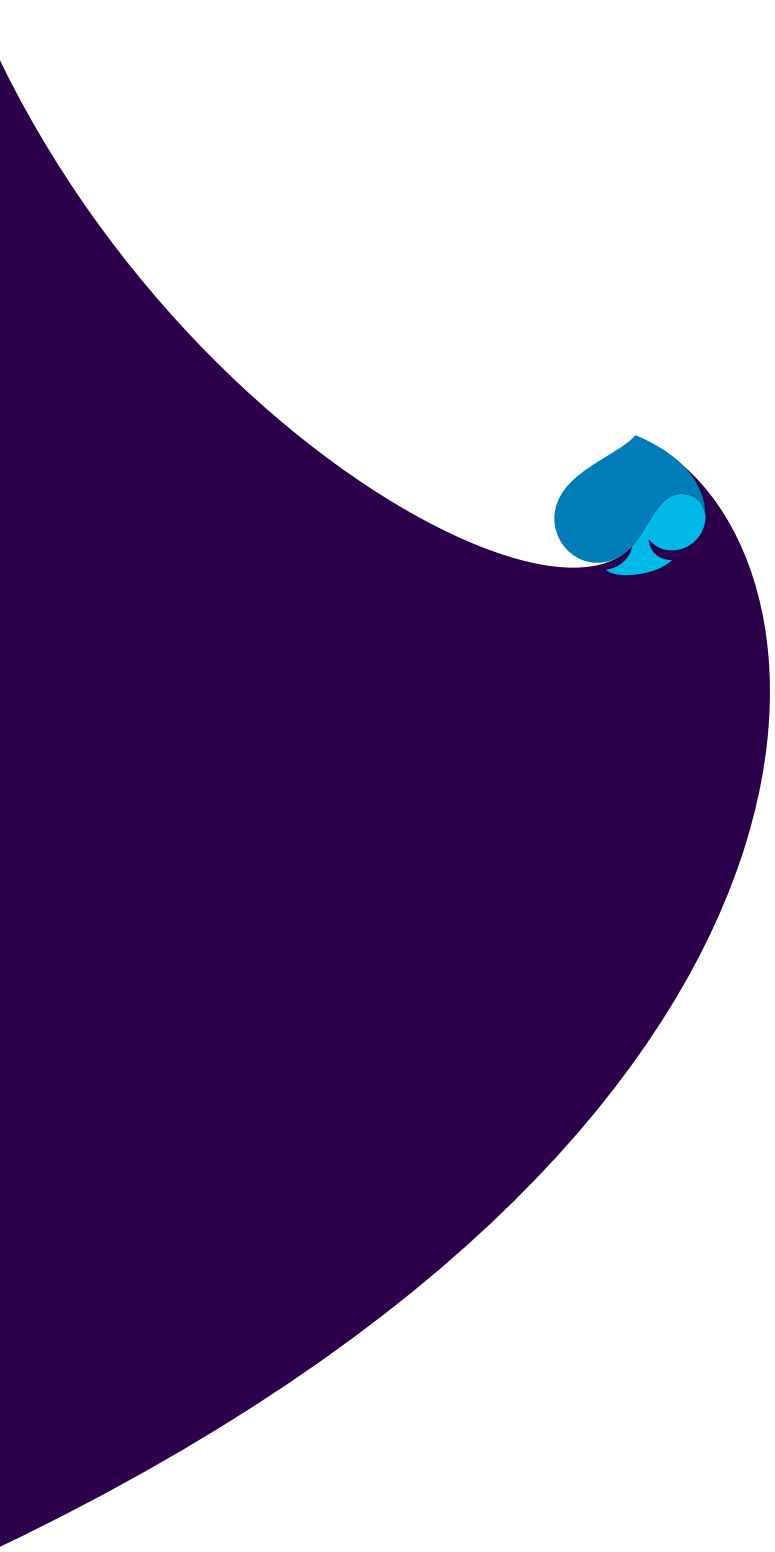

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Capgemini is a global leader in consulting, digital transformation, technology and engineering services. The Group is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year+ heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. Today, it is a multicultural company of 270,000 team members in almost 50 countries. With Altran, the Group reported 2019 combined revenues of €17billion.

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